Government of Western Australia
Department of Mines and Petroleum

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5726/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **BHP Billiton Iron Ore Pty Ltd**

1.3. Property details

Property: *Iron Ore (Mount Goldsworthy) Agreement Act 1964*, Mineral Lease 281SA (AML 70/281)
Exploration Licence 47/1431
Local Government Area: Shire of East Pilbara
Colloquial name: Coondewanna Flats Project

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2.1		Mechanical Removal	Ecohydrological drilling and associated activities

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 19 September 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description

The clearing permit application area has been broadly mapped as Beard vegetation associations:

18: Low woodland; mulga (*Acacia aneura*); and
82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*.
Vegetation Association 18 is the dominant vegetation type within the application area (GIS Database).

A flora and vegetation survey conducted over the application area by Astron Environmental identified the following seven main vegetation communities (Astron, 2011):

2e: Acacia Low Woodland - Low Woodland to Woodland of *Acacia aptaneura* Maslin and J.E. Reid ms and *Eucalyptus victrix* over Low Open Shrubland of *Muehlenbeckia florulenta* over Very Open Tussock Grassland of *Chrysopogon fallax* and *Eriachne benthamii* on Red-brown Loams on Low-Lying Plains;

2f: Acacia Low Woodland - Low Open Woodland to Low Woodland of *Acacia aptaneura* Maslin and J.E. Reid ms and *Eucalyptus victrix* over Scattered Shrubs of *Muehlenbeckia florulenta* over Very Open to Open Tussock Grassland of *Eriachne benthamii, Eulalia aurea* and *Aristida contorta* on Red brown Clayey Loams on Alluvial Flats;

3c: *Acacia catenulata* subsp. *occidentalis* Low Open Woodland - Low Woodland of *Acacia catenulata* subsp. *occidentalis* and *Acacia pruinocarpa* over Scattered Shrubland of mixed species over a Scattered Hummock Grassland of *Triodia melvillei* and *Triodia pungens,* and a Very Open Tussock Grassland of mixed species on Red-brown Loams on Gently Undulating Flats, predominantly within the South-East of the Survey Area;

7b: Eucalyptus woodland - Woodland of *Eucalyptus camaldulensis* subsp. *obtuse* and *E. victrix* over Low Open Woodland of *Acacia aptaneura* Maslin and J.E. Reid ms and *A.tetragonophylla* over Tussock Grassland of *Eulalia aurea* and Hummock Grassland of Triodia species on Sandy Alluvium within some Incised Drainage Areas;

7e: Eucalyptus woodland - Open Woodland to Low Open Woodland of *Eucalyptus victrix* over Low Open Shrubland of *Muehlenbeckia florulenta* and *Acacia tetragonophylla* over Tussock Grassland to Open Tussock Grassland of *Eriachne benthamii* on Clay Soil Flats, encompassing Lake Robinson.

9d: Themeda Tussock Grassland - Scattered Low Trees of *Eucalyptus xerothermica* and *Acacia aptaneura* Maslin and J.E. Reid ms over Scattered Tall Shrubs of *Acacia pyrifolia* var. *pyrifolia* and *Corymbia hamersleyana* over Low Scattered Shrubland of Mixed species over Scattered Hummock Grassland of *Triodia pungens* and Open Tussock Grassland of *Themeda triandra* on Loamy Sands on Flat Plains with Scattered, Slightly Incised, Narrow Drainage Lines.

12a: Eriachne Tussock Grassland - Low Open Woodland of *Acacia aptaneura* Maslin and J.E. Reid ms over Tussock Grassland of *Eriachne benthamii* on Brown-orange Clayey Loam on Flats within the Southeast of the Survey Area.

Clearing Description

Coondewanna Flats project.
BHP Billiton Iron Ore Pty Ltd (BHP Billiton) proposes to clear up to 2.1 hectares of native vegetation within a boundary of approximately 8 hectares, for the purpose of ecohydrological drilling and associated access tracks. The project is located approximately 100 kilometres north-west of Newman, within the Shire of East Pilbara.

Vegetation Condition

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994);
to
Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Comment

The vegetation condition was derived from vegetation surveys conducted by Astron (2011).

The project will involve groundwater, soil and vegetation sampling at three sites. The aim of the sampling is to understand the ecological water requirements of the Coondewanna Flats vegetation (BHP Billiton, 2013). The three drill sites will be located on or adjacent to previously disturbed areas next to existing tracks, to minimise vegetation disturbance wherever possible. Drill pads will be a maximum size of 30 metres by 30 metres. Existing tracks may need to be widened to accommodate the drill rig truck (BHP Billiton, 2013).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposal is not likely to be at variance to this Principle

The application area is located within the Fortescue sub-region of the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). This subregion is generally described as Mulga low woodland over bunch grasses on fine textured soils in valley floors, and *Eucalyptus leucophloia* over *Triodia brizoides* on skeletal soils of the ranges (CALM, 2002).

Level 2 flora and vegetation surveys were conducted over the application area and surrounding areas during 2011 and 2012 (Astron, 2011).

No Threatened or Priority flora species were recorded within the application area. No fauna of conservation significance, or significant fauna habitat features were recorded within the application area (Astron, 2011; BHP Billiton, 2013; ENV, 2010).

The application area falls wholly within the buffer zones of three occurrences of a Priority Ecological Community (PEC), the Coolibah-lignum flats: *Eucalyptus victrix* over *Muehlenbeckia* community (GIS Database). DEC (2013) describes this PEC as: Woodland or forest of *Eucalyptus victrix* (coolibah) over thicket of *Muehlenbeckia florulenta* (lignum) on red clays in run-on zones. Associated species include *Eriachne benthamii, Themeda triandra, Aristida latifolia, Eulalia aurea* and *Acacia aneura* (DEC, 2013).

The following three sub-types have been identified for this PEC:

1. Coolibah and mulga (*Acacia aneura*) woodland over lignum and tussock grasses on clay plains (Coondewanna Flats and Wanna Munna Flats). This sub-type is classified as Priority 3.
2. Coolibah woodlands over lignum (*Muehlenbeckia florulenta*) over swamp wandiree. Lake Robinson is the only known occurrence of this sub-type, which is classified as Priority 1.
3. Coolibah woodland over lignum and silky browntop (*Eulalia aurea)*. There are two known occurrences of this sub-type on the Mt Bruce Flats. This sub-type is classified as Priority 1 (DEC, 2013).

The proposed clearing will impact on the first two PEC sub-types listed above (BHP Billiton, 2013; GIS Database).

Astron (2011) equated the Priority 3 Coondewanna Flats PEC sub-type (listed above as sub-type 1) to their vegetation associations "2e" and "2f". Astron (2011) recorded approximately 2,293 hectares of vegetation associations 2e and 2f during the survey of the application area and surrounding areas. (Astron vegetation associations are described in the Vegetation Description section above.) The two southern-most drill pads and the northern end of the access track occur within this PEC sub-type (BHP Billiton, 2013), accounting for approximately 4 hectares of the overall 8 hectare clearing application area.

The northern-most drill pad occurs just on the edge of the Priority 1 Lake Robinson PEC sub-type (listed above as sub-type 2). Astron (2011) equated this sub-type to their vegetation association "7e". Astron (2011) recorded approximately 528 hectares of vegetation association 7e during the survey. Approximately 1.28 hectares of the total 8 hectare clearing application area falls within this PEC sub-type (GIS Database; BHP Billiton, 2013).

DEC (2013) lists the threats to the Coolibah-lignum flats PEC as dewatering, grazing, and clearing associated with infrastructure corridors. The very small areas of proposed clearing within the PEC are unlikely to have any significant impact on conservation status of the PEC.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

Astron (2011)
BHP Billiton (2013)

CALM (2002)
ENV (2010)
GIS Database:
- Threatened Ecological Sites Buffered

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle

The following five fauna habitat types were identified within the application area: Alluvial Plain, Coolibah Lignum, Mulga, Sandy areas and Major Drainage Line (ENV, 2010). The Major Drainage Line habitat has been identified as having the highest habitat significance. This habitat type will be intersected by approximately 200 metres of the proposed access track, and also occurs in part of one of the proposed drill pads. However there are no significant fauna habitat features within the areas of this habitat which will be impacted by the proposed clearing (BHP Billiton, 2013).

Desktop surveys identified three fauna species of conservation significance with the potential to occur in the vicinity of the application area: the Greater Bilby (*Macrotis lagotis*), the Pilbara Leafnosed Bat (*Rhinonicteris aurantius*) (Pilbara form) and the Olive Python *(Liasis olivaceus barroni*) (Pilbara subspecies). However none of these species were recorded during the surveys, and ENV (2010) considered that the habitats available within the application areas were unlikely to represent significant habitat for any of these species.

The fauna habitat types found within the application area are widespread within the region (GIS Database), and the relatively small area of proposed clearing is unlikely to have any significant impact on fauna habitats at either a local or regional scale.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

BHP Billiton (2013)
ENV (2010)
GIS Database:
- Pre-European Vegetation

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments

Proposal is not likely to be at variance to this Principle

Flora surveys of the application area did not record any species of Declared Rare Flora, Priority Flora or flora species of restricted distribution (Astron, 2011; BHP Billiton, 2013).

The vegetation associations within the application area are common and widespread within the Pilbara region (Astron, 2011; BHP Billiton, 2013; GIS Database), and the vegetation proposed to be cleared is unlikely to be necessary for the continued existence of any species of rare flora.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

Astron (2011)
BHP Billiton (2013)
GIS Database:
- Declared Rare and Priority Flora List
- Pre-European Vegetation

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments

Proposal is not likely to be at variance to this Principle

There are no known Threatened Ecological Communities (TEC's) located within a 50 kilometre radius of the application area (GIS Database). The nearest recorded TEC is the Ethel Gorge aquifer stygobiont community, which is located approximately 100 kilometres south-east of the application area (GIS Database).

Surveys of the application area did not identify any Threatened Ecological Communities (Astron, 2011; BHP Billiton, 2013).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

Astron (2011)
BHP Billiton (2013)
GIS Database:
- Threatened Ecological Sites Buffered

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments

Proposal is not at variance to this Principle

The area applied to be cleared is located within the Pilbara IBRA bioregion (GIS Database). There is approximately 99% of Pre-European vegetation remaining within the bioregion (Government of Western Australia, 2013). The vegetation of the application area is classified predominantly as Beard vegetation association 18 - Low woodland; mulga (*Acacia aneura*); with a small area of the proposed access track classified as Beard vegetation association 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana*. These vegetation associations remain at approximately 99% of pre-European extent in the state and also in the Pilbara bioregion (Government of Western Australia, 2013). Hence, the area proposed to clear does not represent a significant remnant of vegetation in an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion - Pilbara	17,808,657	17,733,584	~ 99	Least Concern	6.3
Beard vegetation associations - State					
18	19,892,305	19,843,727	~ 99	Least Concern	2.1
82	2,565,901	2,553,217	~ 99	Least Concern	10.2
Beard vegetation associations - Bioregion					
18	676,556	672,424	~ 99	Least Concern	16.7
82	2,563,583	2,550.898	~ 99	Least Concern	10.2

* Government of Western Australia (2013)
** Department of Natural Resources and Environment (2002)

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology

Department of Natural Resources and Environment (2002)
Government of Western Australia (2013)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal may be at variance to this Principle

There are no permanent watercourses or wetlands within or in close proximity to the application area (GIS database).

One seasonal lake (Lake Robinson) and several minor, non-perennial watercourses occur in close proximity to the application area and some ephemeral drainage lines may pass through the proposed access track (GIS Database). These drainage lines are dry for most of the year, only flowing briefly following significant rainfall events (BHP Billiton, 2013).

Based on the above, the proposed clearing may be at variance to this Principle. However, the proposed clearing of 2.1 hectares of native vegetation is unlikely to result in any significant impact on Lake Robinson, the ephemeral watercourses or any other watercourses or wetlands.

Methodology

BHP Billiton (2013)
GIS Database:
- Geodata, Lakes
- Hydrography, linear
- Governor 50cm Orthomosaic - Landgate 2004
- Munjina 50cm Orthomosaic - Landgate 2004

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposal is not likely to be at variance to this Principle

The application areas fall predominantly within the Wannamunna Land System, with the southern part of the access road mapped as the Boolgeeda Land System (GIS Database).

The Boolgeeda Land System is characterised by stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands (Van Vreeswyk et al., 2004). The vegetation is generally not prone to degradation and the system is not susceptible to erosion (Van Vreeswyk et al., 2004).

The Wannamunna Land System is characterised by hardpan plains and internal drainage tracts supporting mulga shrublands and woodlands (and occasionally eucalypt woodlands) (Van Vreeswyk et al., 2004). Generally the system has low susceptibility to erosion but disturbances to overland flow processes by inappropriate positioning or construction of infrastructure such as roads can have adverse effects on vegetation (Van Vreeswyk et al., 2004).

The proposed clearing of 2.1 hectares of native vegetation for drill pads and access tracks is unlikely to result in appreciable land degradation.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

Van Vreeswyk et al. (2004)
GIS Database:
- Rangeland Land System Mapping

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments

Proposal is not likely to be at variance to this Principle

The nearest conservation area to the application area is the Karijini National Park, which is located approximately 14 kilometres to the west of the application area, at its nearest point (GIS Database). The proposed clearing is unlikely to have any impacts on the environmental values of this or any other conservation area.

The application area falls partly within a section of the Juna Downs pastoral lease which the Department of Parks and Wildlife has proposed for exclusion from pastoral activities from 2015 (GIS Database). However the proposed clearing of 2.1 hectares of native vegetation for drill pads and access tracks is unlikely to have any significant impact on the conservation values of this area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

GIS Database:
- DEC proposed 2015 pastoral lease exclusions
- DEC Tenure
- Pastoral Leases

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposal is not likely to be at variance to this Principle

The application area is not within a Public Drinking Water Source Area. There are no permanent watercourses or wetlands within the application area (GIS Database). There are several seasonal watercourses passing through or in close proximity to the application area(GIS Database). However the topography of the application area is relatively flat and the small area of proposed clearing is unlikely to result in increased sedimentation of any watercourse.

The small area of the proposed clearing is unlikely to cause deterioration in the quality of surface or underground water.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

GIS Database:
- Hydrography, Linear
- Public Drinking Water Source Areas
- Topographic Contours, Statewide

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments

Proposal is not likely to be at variance to this Principle

The climate of the region is semi-arid, with a low average rainfall of approximately 200-300 millimetres per year (Van Vreeswyk et al., 2004). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (BHP Billiton, 2013).

There are no permanent water courses or waterbodies within the application area (GIS Database). Temporary localised flooding may occur during heavy rainfall events. However, the proposed clearing of 2.1 hectares for access tracks and drill pads is unlikely to increase the incidence or intensity of natural flooding events.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

BHP Billiton (2013)
Van Vreeswyk et al. (2004)
GIS Database:
- Hydrography, linear

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

The clearing permit application was advertised on 12 August 2013 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WC2011/006) over the area under application (GIS Database). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are two registered Aboriginal Sites of Significance located within or in close proximity to the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment Regulation (formerly the Department of Environment and Conservation) and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

Methodology

GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims - Determined by the Federal Court
- Native Title Claims - Filed at the Federal Court
- Native Title Claims - Registered with the NNTT

4. References

Astron (2011) Coondewanna Flats Flora and Vegetation Assessment. Prepared for BHP Billiton Pty Ltd. Astron Environmental Services, May 2011.

BHP Billiton (2013) Application for a Native Vegetation Clearing Permit for Phase II of the Ecohydrological Program for Coondewanna Flats. BHP Billiton Iron Ore Pty Ltd, Western Australia.

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

DEC (2013) Priority Ecological Communities for Western Australia. Version 18. Species & Communities Branch, Department of Environment and Conservation. 26 March 2013

ENV (2010) Area C West NVCP Flora, Vegetation and Fauna Assessment. Prepared for BHP Billiton Pty Ltd. ENV Australia Pty Ltd, June 2010.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.

Keighery B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Van Vreeswyk, A.M.E., Payne, A.L., Hennig, P., and Leighton, K.A. (2004) An Inventory and Condition Survey of the Pilbara Region, Western Australia. Department of Agriculture, Western Australia.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005.* Department of Conservation and Land Management, Como, Western Australia} :-

P1	**Priority One - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	**Priority Two - Poorly Known taxa**: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	**Priority Three - Poorly Known taxa**: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	**Priority Four – Rare taxa**: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	**Declared Rare Flora – Extant taxa** *(= Threatened Flora = Endangered + Vulnerable)*: taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
X	**Declared Rare Flora - Presumed Extinct taxa**: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

Schedule 1	**Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
Schedule 2	**Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
Schedule 3	**Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
Schedule 4	**Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna.* Department of Conservation and Land Management, Como, Western Australia} :-

P1 **Priority One: Taxa with few, poorly known populations on threatened lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P2 **Priority Two: Taxa with few, poorly known populations on conservation lands**: Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P3 **Priority Three: Taxa with several, poorly known populations, some on conservation lands**: Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.

P4 **Priority Four: Taxa in need of monitoring**: Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.

P5 **Priority Five: Taxa in need of monitoring**: Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999)*

EX **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.

EX(W) **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.

CR **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.

EN **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.

VU **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.

CD **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.